

In the claims:

Please amend the claims as follows:

1(Currently Amended). A method for obtaining the leucocyte components from human blood comprising;

(A) a first step for fracturing ~~the~~ cell membranes of leucocytes of ~~the~~ human blood by physical means, and

(B) a second step for separating ~~the~~ leucocyte components from ~~the~~ blood liquid ~~resulted~~ resulting from the first step, said blood liquid containing the leucocytes with fractured cell membranes, (in order) so that to collect the separated layers (or parts) can be collected individually.

2(Currently Amended). The method for obtaining the leucocyte components from human blood according to claim 1, wherein ~~the~~ said physical means used in ~~the~~ said first step (A) for fracturing ~~the~~ said cell membranes of leucocytes is selected from the group consisting of:

(a) a supersonic method for applying ~~the~~ supersonic sound waves selected from between ~~of~~ 1 MHz ~~to~~ and 50 MHz to ~~the~~ said blood (liquid) containing leucocytes in order to fracture ~~the~~ said cell membranes of leucocytes by ~~the~~ vibration thereof ~~caused by the supersonic;~~

(b) a laser method employing a laser having a power selected from between ~~for irradiating the laser of~~ 10 and ~~to~~ 100 mW ~~, 50/cm<sup>2</sup>~~ for irradiating said blood (liquid) for a time up to several seconds to several minutes (about 3 minutes) to the same point in the said blood liquid containing leucocytes in order to fracture the said cell membranes of said leucocytes;

(c) an osmotic pressure method for changing ~~the~~ an osmotic pressure of ~~the~~ said blood (liquid) containing leucocytes to fracture ~~the~~ said cell membranes;

(d) a freezing and defrosting method for freezing ~~the~~ said blood (liquid) containing leucocytes at ~~the~~ a temperature ~~range from~~ selected from between -5 degrees Celsius to ~~the~~ absolute zero ~~point~~ and ~~then~~ thereafter defrosting ~~this~~ said frozen blood (liquid) at ~~a~~ about room temperature ~~(about -20 degrees)~~ to fracture ~~the~~ said cell membranes; and

(e) a vacuum method for rapidly-reducing ~~the~~ pressure in a vacuum chamber to fracture ~~the~~ said cell membranes of ~~the~~ said blood (liquid) containing leucocytes ~~set~~ in ~~the~~ said vacuum chamber.

3(Currently Amended). The method for obtaining ~~the~~ leucocyte components from human blood according to claim 1, wherein ~~the~~ said second step (B) for separating ~~the~~ said leucocyte components includes a centrifugal precipitation which stirs ~~the~~ said blood liquid containing ~~the~~ said leucocytes with cell membranes fractured by ~~the~~ said first step (A), and then separates ~~the~~ said stirred blood liquid into multiple layers corresponding <sup>to</sup> the leucocyte components by the centrifugal precipitation.

4(Currently Amended). The method for obtaining ~~the~~ leucocyte components from human blood according to claim 1, wherein ~~the~~ said second step (B) includes an electrophoresis ~~work~~ step which separates ~~the~~ said blood liquid containing ~~the~~ said leucocytes with fractured cell membranes obtained by ~~the~~ said first step (A) into multiple

parts containing isolated ~~corresponding to the said~~  
leucocyte components ~~by the electrophoresis work~~ .

5 (Currently Amended). The method for obtaining ~~the~~  
leucocyte components from human blood according to claim 1,  
wherein ~~the~~ said first step (A) uses ~~the~~ cultured  
leucocytes obtained from ~~the specific~~ persons who are  
judged healthy through predetermined health and blood  
checks.

6 (Currently Amended). The method for obtaining ~~the~~  
leucocyte components from human blood according to claim 1,  
further comprising a step for ~~finding~~ determining  
therapeutic effects ~~owing to~~ of ~~the~~ separated and collected  
leucocyte components, said step including ~~various~~  
~~therapeutic tests using blood samples collected from~~  
~~patients suffering from various diseases~~ combining isolated  
leucocyte components with blood cells obtained from a  
patient with a pre-determined disease and thereafter  
observing effects of said isolated leucocyte components  
when combined with said blood cells.

7 (New). A method of identifying a therapeutically  
effective leucocyte component comprising:

fracturing cell membranes of leucocytes cultured from  
healthy human blood by physical means and isolating  
leucocyte components obtained therefrom;

obtaining blood cells from a patient with a pre-  
determined disease and separating said blood cells into  
upper layer blood cells and lower layer blood cells;

dividing each of said upper layer blood cells and  
lower layer blood cells into a plurality of test samples;


adding said isolated leucocyte components to said plurality of test samples thereby to determine the therapeutic effect of each said isolated leucocyte component on said blood cells; *and*

selecting a leucocyte component therapeutically effective for treating said pre-selected <sup>determined</sup> disease by identifying the component which, when added to said test samples, results in the least degeneration of erythrocytes and longest erythrocyte life span.

8(New). The method according to claim 7 wherein the physical means for fracturing cell membranes is a method selected from the group consisting of:

(a) a supersonic method for applying supersonic sound waves selected from between 1 MHz and 50 MHz to said blood (liquid) containing leucocytes in order to fracture said cell membranes of leucocytes by vibration thereof;

(b) a laser method employing a laser having a power selected from between 10 and 100 mW for irradiating said blood (liquid) for a time up to about 3 minutes in order to fracture said cell membranes of said leucocytes;

 (c) an osmotic pressure method for changing an osmotic pressure of said blood (liquid) containing leucocytes to fracture said cell membranes;

(d) a freezing and defrosting method for freezing said blood (liquid) containing leucocytes at a temperature selected from between -5 degrees Celsius to absolute zero and thereafter defrosting said frozen blood (liquid) at about room temperature to fracture said cell membranes; and


(e) a vacuum method for rapidly-reducing pressure in a vacuum chamber to fracture said cell membranes of said blood (liquid) containing leucocytes in said vacuum chamber.

9(New). The method according to claim 7 wherein prior to said cell membrane fracturing step, said leucocytes obtained from healthy human blood are incubated.

10(New). The method according to claim 9 wherein said leucocytes obtained from healthy human blood are incubated for approximately 48 hours.

11(New). The method according to claim 9 wherein said upper and lower layer blood cells are incubated prior to adding said isolated leucocyte components.

12(New). The method according to claim ~~12~~<sup>11</sup> wherein said upper and lower layer blood cells are mixed with tissue culture medium and thereafter incubated at approximately 37 degrees Celsius in approximately 5% carbon dioxide.

 13(New). The method according to claim 11 further including an additional step wherein after said isolated leucocyte components are added to said test samples, said test samples, in combination with said isolated leucocyte components, are incubated.

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